

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 64-055441

(43)Date of publication of application : 02.03.1989

(51)Int.Cl.

F16D 69/02  
C08J 5/14  
C09K 3/14  
D04H 1/42

(21)Application number : 62-211300

(71)Applicant : NISSHINBO IND INC

(22)Date of filing : 27.08.1987

(72)Inventor : KOBAYASHI MITSURU

## (54) FRICTION MATERIAL

## (57)Abstract:

PURPOSE: To obtain non-asbestos friction material by incorporating reinforcing fibers composed of rock wool and one or more types of specific fibers, or composed of specific rock wool; a binder; and a friction regulating agent to a friction substrate.

CONSTITUTION: Reinforcing fibers composed of rock wool containing 30W70wt.% of SiO<sub>2</sub>, 0W45wt.% of CaO, 3W20wt.% of Al<sub>2</sub>O<sub>3</sub>, 0W30wt.% of MgO, 2W10wt.% of FeO, 0W3wt.% of MnO, 0.3wt.% of Fe<sub>2</sub>O<sub>3</sub>, 0W3wt.% of S and 0W2wt.% of Cr<sub>2</sub>O<sub>3</sub> are employed. Alternatively, reinforcing fibers where the rock wool mixed with one or more than two of steel fibers, glass fibers, aromatic polyamid fibers, etc., are employed. These reinforcing fibers, binder and friction regulating agent are added. Thus produced friction material contains no asbestos and has stable friction coefficient for causing less abrasion of the friction material and counterpart material and has sufficiently high mechanical strength.

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the  
examiner's decision of rejection or application  
converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of  
rejection]